

GENERIC · CHASSIS

C0727

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0727

Trailer Connector Circuit Malfunction

C0727 indicates that the vehicle's body control module (BCM) or trailer brake controller has detected an abnormal condition in the trailer connector circuit, such as an open, short, or excessive current draw. The computer monitors the voltage and current on the trailer tow circuit and sets this code when the readings fall outside the expected range for proper trailer lighting or braking operation.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Chassis	Generic (all makes)	Medium	Intermediate	Brakes, steering and suspension

Symptoms you may notice

- Trailer lights (running lights, brake lights, turn signals) fail to illuminate or operate erratically when a trailer is connected
- Trailer brake controller displays a fault message or fails to apply trailer brakes
- Dashboard warning light (trailer indicator or service trailer brake system) illuminated
- Intermittent operation of trailer lights over bumps or when the trailer harness is wiggled
- Often no symptoms besides the warning light when no trailer is attached

Common causes, most likely first

- Corroded, damaged, or loose pins in the vehicle's trailer connector socket
- Damaged or chafed wiring in the trailer harness between the vehicle and trailer
- Water intrusion into the trailer connector causing a short or high resistance
- Failed trailer brake controller module or its internal circuitry
- Blown fuse or fusible link in the trailer tow circuit
- Faulty body control module (BCM) or trailer interface module
- Aftermarket accessories improperly wired into the trailer circuit



How to diagnose and fix it

- 1 Inspect the trailer connector socket and plug for corrosion, bent pins, or debris; clean or replace as needed
- 2 Check all fuses and relays related to the trailer tow circuit, including those under the hood and in the interior fuse box
- 3 Disconnect the trailer and clear the code to see if it returns; if it does not, the fault is likely in the trailer wiring or components
- 4 Perform a voltage drop test on the trailer connector pins to identify high resistance or open circuits
- 5 Inspect the wiring harness from the connector to the BCM for chafing, cuts, or loose grounds
- 6 Test the trailer brake controller according to manufacturer procedures; replace if faulty
- 7 If all external circuits test good, diagnose the BCM or trailer interface module for internal faults

Trailer Connector Faults You Might Overlook

- A common mistake is replacing the trailer brake controller when the real problem is a corroded ground connection at the trailer connector, which can mimic a failed module.
The code can set even when no trailer is connected if the vehicle's connector has water intrusion or debris causing a short between pins.
- Some vehicles require a trailer emulator or resistor to be plugged in when no trailer is attached, otherwise the BCM may set a false C0727.
- Aftermarket LED trailer lights can draw less current than expected and trigger a trailer connector malfunction code on vehicles that monitor current draw.

Always check the trailer's own wiring and lights first; a shorted bulb or damaged wire on the trailer can set this code in the tow vehicle.

Can I keep driving with C0727?

You can usually drive the vehicle without a trailer, but trailer lighting and braking may be inoperative, which is unsafe if you are towing. Avoid towing until the fault is repaired, and have the circuit inspected promptly to prevent further electrical damage.

Tools that help

- Digital multimeter
- Test light
- Trailer connector pinout diagram
- Wire crimping tool and terminal kit
- Scan tool with bidirectional control capability



Reading C0727

- C** Chassis: brakes, steering and suspension.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 7** Brakes, steering and suspension.
- 27** The exact fault within that area.

Often seen with

C0730 Electric Power Steering Motor Position Sensor Circuit · **U0100** Lost Communication With ECM/PCM A

See it working

Watch the animated explainer [How a Catalytic Converter Works: 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c0727/>

